

**REMARKS****Summary of the Office Action**

Claims 1-3 stand provisionally rejected under the judicially created doctrine of non statutory obviousness-type double patenting as being unpatentable over claim 2 of co-pending application no. 2007/027869<sup>1</sup>.

Claims 1-6 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kosonocky (U.S. Patent No. 4,646,119) (hereinafter "Kosonocky").

**Summary of the Response to the Office Action**

Applicants have amended independent claims 1 and 2 to differently describe embodiments of the disclosure of the instant application and/or improve the form of the claims. Also, claims 4-6 have been canceled without prejudice or disclaimer. Accordingly, claims 1-3 remain currently pending and under consideration.

**Double Patenting Rejection**

Claims 1-3 stand provisionally rejected under the judicially created doctrine of non statutory obviousness-type double patenting as being unpatentable over claim 2 of co-pending application no. 2007/0272869. While Applicants do not necessarily concede to these rejections, Applicants submit a Terminal Disclaimer to facilitate allowance of the present application, thereby obviating the double patenting rejections. As the applied application has now issued as

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<sup>1</sup> Applicants understand that the Office Action's reference to "2007/027869" is a typographical error intended to read --2007/0272869--. Accordingly, Applicants will proceed with this understanding in today's as-filed papers. However, to the extent that Applicants' understanding in this regard is incorrect, the Examiner is requested to provide clarification in the next Office Communication.

U.S. Patent No. 7,514,687, Applicants are submitted a Terminal Disclaimer over a "Prior" Patent. Accordingly, Applicants request that the double patenting rejections be withdrawn.

**Rejections under 35 U.S.C. 102(b)**

Claims 1-6 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kosonocky. Applicants have amended independent claims 1 and 2 to differently describe embodiments of the disclosure of the instant application and/or improve the form of the claims. Claims 4-6 have been canceled without prejudice or disclaimer, rendering the rejections of those claims moot. To the extent that these rejections might be deemed to still apply to the remaining claims as newly-amended, they are respectfully traversed for at least the following reasons.

Applicants respectfully submit that Kosonocky does not disclose "a single potential gradient" as described in newly-amended independent claims 1 and 2. Applicants respectfully submit that this amendment to independent claims 1 and 2 is supported, for example, by paragraphs [0009], [0011], [0038] of the specification and Figs 4A and 4B of the instant application. Applicants respectfully submit that in Kosonocky, such "a single potential gradient" is not formed; instead, a plurality of potential wells are formed in the charge transfer direction.

Applicants respectfully submit that in Kosonocky, the charges accumulated in each of the plurality of potential wells are successively transferred to a subsequent potential well by application of transfer voltages of predetermined phase to the transfer electrodes. In this regard, see Fig. 13 in Kosonocky. Therefore, Applicants respectfully submit that a transfer time corresponding to the number of potential wells is thus required. As a result, Applicants respectfully submit that a significant amount of time is required in order to sum the charges accumulated in the respective potential wells.

Applicants respectfully submit that in the present invention, the generated charges are moved along the single potential gradient. As a result, there is no need to apply the transfer voltages of predetermined phase for the charge transfer as in the arrangement disclosed in Kosonocky. Accordingly, Applicants respectfully submit that the charge transfer can be performed in a simple manner by way of the present invention. Also, Applicants respectfully submit that, because the transfer speed is governed by the potential gradient and is made high, the transfer time can be shortened.

Accordingly, Applicants respectfully assert that the rejections under 35 U.S.C. § 102(b) should be withdrawn because Kosonocky does not teach or suggest each feature of independent claims 1 or 2 of the instant application, as newly-amended. As pointed out in MPEP § 2131, "[t]o anticipate a claim, the reference must teach every element of the claim." Thus, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987)."

Furthermore, Applicants respectfully assert that the dependent claim 3 is allowable at least because of its dependence from each of independent claims 1 and 2 and the reasons discussed previously.

### CONCLUSION

In view of the foregoing, Applicants submit that the pending claims are in condition for allowance, and respectfully request reconsideration and timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response; the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.

**EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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